

REMARKS

Claim 17 has been amended and claims 19-23 have been added as supported at page 8, lines 6-22 of the specification.

No new matter has been added.

Claims 2, 4, 5, 7-13, 15-17 and 19-23 are active in this application.

Applicants respectfully request reconsideration of the application, as amended, in view of the following remarks.

The rejection of claims 2, 7-13 and 15-17 as being indefinite was withdrawn in the Advisory Action of December 3, 2009.

The rejections of the claims over Simon et al and Hiratsuka et al, Degussa, Kohlhammer et al, Hahnle et al, Mattor et al, Dobson et al are respectfully traversed.

The present invention as set forth in **Claim 17** relates to a method of coating and/or laminating of a structure in the form of a sheet, comprising:

contacting a hotmelt adhesive structure with said structure in the form of a sheet;

wherein said hot melt adhesive structure comprises

an upper dot and a lower dot on a substrate;

wherein the upper dot and the lower dot comprise an amine-terminated crosslinkable copolyamide and the lower dot further comprises a crosslinker and an acrylic and/or polyurethane dispersion;

wherein the crosslinker is selected from the group consisting of the isocyanates and has more than two reactive groups per molecule; and

wherein the base dot consists of a passivated isocyanate and an amine terminated copolyamide and is applied in halftone formation as a paste;

wherein a parting layer between upper dot and lower dot is resistant to hydrolytic attack.

New Claim 19 provides that the **parting layer between upper dot and lower dot is resistant to hydrolytic attack during laundering.**

Claim 20 provides that the lower dot is crosslinked even under drying conditions.

Claim 21 provides that the upper dot is crosslinked with the lower dot during melting.

Claim 22 provides that a sharp increase in the molecular weight of the lower dot occurs following coating, and the lower dot is no longer able to sink into a knit.

Claim 23 provides that, in the course of subsequent bonding, the low-viscosity polyamide of the upper dot is compelled to flow against the upper material that is to be bonded, since it is unable to flow off downward, hence giving very high adhesions even with very small amounts of hotmelt adhesive.

The specification states at page 8, lines 6-22:

“The advantage of the new technology is that the lower dot is crosslinked even under the drying conditions and, owing to its amine termination, the upper dot is crosslinked with the lower dot during melting, so giving an optimum attachment. Since there is a sharp increase in the molecular weight of the lower dot following coating, it is no longer able to sink into the knit. In the course of subsequent bonding, the low-viscosity polyamide of the upper dot is compelled to flow against the upper material that is to be bonded, since it is unable to flow off downward, hence giving very high adhesions even with very small amounts of hotmelt adhesive. The parting layer between upper dot and base dot, which hitherto has been the weak point of the system, especially in the course of laundering, is more resistant to hydrolytic attack than prior systems and therefore exhibits substantially higher resistances.”

Simon et al and Hiratsuka et al, Degussa, Kohlhammer et al, Hahnle et al, Mattor et al, Dobson et al fail to disclose or suggest that **wherein a parting layer between upper dot and lower dot is resistant to hydrolytic attack.**

In addition, the subject matter of Claims 19-23 is not disclosed or suggested by Simon et al and Hiratsuka et al, Degussa, Kohlhammer et al, Hahnle et al, Mattor et al, Dobson et al

Applicants note that the corresponding German document of Simon et al. (DE 198 08 809) is discussed at page 3, first paragraph, of the specification.

In Simon et al., it is described how a free isocyanate is stabilized against water. Therein, the free isocyanate is extruded into an inert polyolefin matrix and then finely ground once again. In this way, a stable cross-linkable system was created for the base dot. The disadvantage of this system is the complex and therefore expensive production of the water-stable isocyanate, and in addition the polyolefin matrix hinders the diffusion speed, thus resulting in a reduction of the reaction rate. Further, it has so far not been possible to provide a stable crosslinkable system for the base dot. See page 3, lines 11 and 12 of the specification. Either the isocyanates could not be stabilized in water or the activation temperatures for crosslinking were too high.

The cross-linkable melt-adhesive structure of the present invention has a feature that the reactive components present in the melt-adhesive structure react with cross-linking only in the melt. The activation temperature is lower than in previous systems and the structure has a good water resistance. See page 3, lines 24-32 of the specification.

In addition, the method of the present invention represents a simplification compared to Simon et al.

While the Examiner recognizes that Simon et al. do not disclose application of a lower dot in halftone formation (see page 4, item 11 of the Office Action), the Examiner has cited Hiratsuka. The Examiner has taken the position that any non-uniform distribution of dots that appears essentially uniform in total is considered a halftone method. The Examiner refers to column 4, lines 18-21 of Hiratsuka et al.

Hiratsuka et al describe a multi-layer test strip, wherein the layers are bonded to one another with an adhesive. This adhesive is applied in the form of a grid on the interface. The adhesive is supposed to occupy as little of the total area of the interface as possible, while the grid is supposed to be as small and thin as possible and no capillary effects are permitted to exist between the elements of the grid. However, the type of adhesive is not particularly important here. Therefore a liquid or heat-sensitive adhesive is generally recommended (see claim 5).

The subject matter of the present invention relates to the type of adhesive for improvement of coating technologies, such as duo or double-dot coating.

The method of the present invention is used in the garments industry. Large amounts have to be adhesively bonded by machine; this means that the adhesive effect must be developed very rapidly. In this connection, the adhesive is not permitted to sink into the interlining, only small amounts of adhesive should be used, the templates are not permitted to become clogged and the adhesive must also be laundry-friendly.

Hiratsuka et al certainly do not have to consider these problems in their method. Their test strips are used for blood examinations. In this connection, large amounts of test strips are certainly not manufactured by machine, and so the adhesive is not subject to such strict requirements.

Hiratsuka et al, Degussa, Kohlhammer et al, Hahnle et al, Mattor et al, Dobson et al do not cure the defects of Simon et al.

Therefore, the rejections of the claims over Simon et al and Hiratsuka et al, Degussa, Kohlhammer et al, Hahnle et al, Mattor et al, Dobson et al are believed to be unsustainable as the present invention is neither anticipated nor obvious and withdrawal of these rejections is respectfully requested.

This application presents allowable subject matter, and the Examiner is kindly requested to pass it to issue. Should the Examiner have any questions regarding the claims or otherwise wish to discuss this case, he is kindly invited to contact Applicants' below-signed representative, who would be happy to provide any assistance deemed necessary in speeding this application to allowance.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Kirsten A. Grueneberg, Ph.D.
Registration No.: 47,297

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)